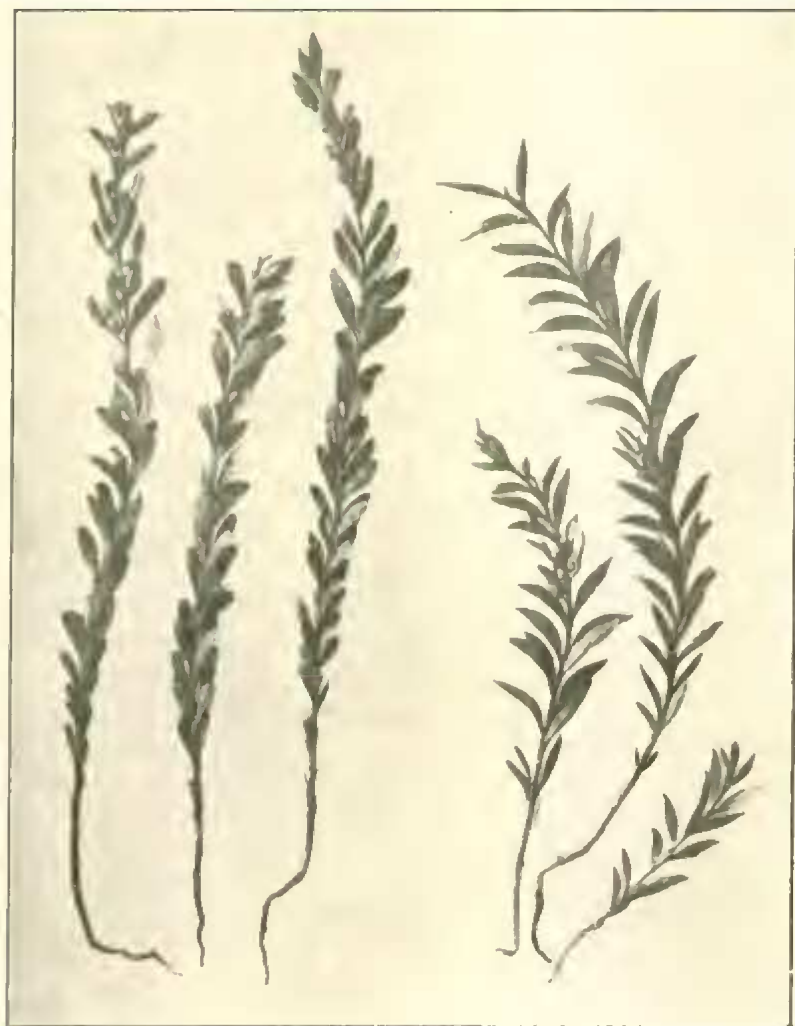


TWO NEW SPECIES OF *TMESIPTERIS*

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The genus *Tmesipteris* was first discovered in New Zealand and other Pacific Islands (R. G. Forster), and the original species (*T. tannensis*) was described by Sprengel¹ in 1799 under the genus *Lycopodium*. In 1800, Bernhardt² originated the genus *Tmesipteris*, typified by Sprengel's species. Labillardiere,³ in 1806, referred a Tasmanian plant to *T. tannensis*; but this



T. parva and *T. ovata*, new species.

was described by Endlicher⁴ in 1833 as *Tmesipteris Billardieri*; though Robert Brown⁵ had, in 1810, included it in his *Psilotum truncatum* from the Port Jackson area. Endlicher⁶ had previously described *Psilotum Forsteri*—a form found in New Zealand and Norfolk Island.

Subsequent botanists included all the above, and several other forms, under the original species (see discussion by George Bentham⁷); P. A. Dasgord⁸ attempted to set up several forms as species. He originated the names *T. lanceolata* and *T. elongata*; but, unfortunately, he disregarded the work done by earlier botanists whose names have priority.

This is unsatisfactory; for investigation has proved that there is a number of well-defined species, with constant differences in habit, size and shape of leaves and fruits, and in geographical range. The purpose of this paper is to deal with the four Australian species, which are as follows:

Tmesipteris Billardieri Endl.⁴ "*foliis apice truncatis mucrone setaceo. T. tasmense* Lab." Stems $\frac{1}{2}$ to 2 feet long; leaves large, $\frac{1}{4}$ to $1\frac{1}{4}$ inches long, sparse, 4 to 6 to the inch, very broad especially at the upper base, tips truncate and then with mucronate points; capsules very large, pointed. The form illustrated by Labillardiere is plentiful in Tasmania and Victoria, and extends into New South Wales (Mount Dromedary, Blue Mountains). *Psilotum truncatum*, which Endlicher included as a synonym, is a distinct species. (See below.)

TMESIPTERIS PARVA sp. nov. *Plantis parvis; foliis parvis, numerosis, angustis, sub-falcatis, acuminatis, non setaceo-mucronatis; capsulis parvis rotundis.*

Stems short, 3 to 5 inches long; leaves numerous, about 15 per inch, narrow, sub-falcate, hardly mucronate at the tips, about $\frac{1}{2}$ inch long; capsule very small and rounded.

Habitats: Karlo Creek, 1/3/1941 (type); Mount Drummer, 14/6/1941; Harrison's Creek (Mallacoota Inlet), 7/2/1943; all in East Victoria and collected by the author. Also, "Terra Gippsland," Dallachy; Waratah Bay (South Gipps.), Rossiter and Heathcote, 1939; Dandenong Ranges. Chas. Walter, 1883; Mount Dromedary (N.S.W.), Reader, 3/8/1880.

TMESIPTERIS OVATA sp. nov. *Plantis parvis; foliis parvis, ovatis, numerosis, apicibus carum obtusis setaceo-mucronatis; capsulis parvis rotundis.*

Plants small, up to 6 inches long; leaves small, up to $\frac{3}{4}$ inch long, crowded, numerous, about 15 per inch, ovate, tips rounded and mucronate; capsules small, rounded.

Habitats: Mount Drummer, 1/6/1941 (type); Howe Ranges, 8/2/1943 (both in East Victoria); N. A. Wakefield. Also, Dandenongs, Dallachy, Jan., 1850; and probably South-east New South Wales.

In the accompanying plate, the two new species are shown, about natural size.

Both *T. parva* and *T. ovata* are very abundant in the East Gippsland "jungles" on trunks of treeferns.

Tmesipteris truncata (R. Br.) Desv.⁹ (*Psilotum truncatum* R. Brown,⁵ excluding the synonym *T. tasmense* Lab., and the Tasmanian locality.) Stems up to 9 inches long; leaves up to an inch long, narrow-linear, tips very truncate or bilobed, and with mucronate points; capsule usually rounded, rarely pointed. Typified by Brown's Port Jackson specimens, and extending from Mount Dromedary, N.S.W., to Cairns, Queensland.

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